

Comparison of health expenditures in U.S. and Hawaii economies

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The author uses published statistical and economic data to demonstrate that Hawaii's health care costs, as a percent of gross product, are significantly below the U.S. average, perhaps as low as 8.1% of Gross State Product (GSP).

Introduction

Although a great deal has been written about the growing portion of the Gross National Product (GNP) being expended on medical services, there has been no comparative data pub-

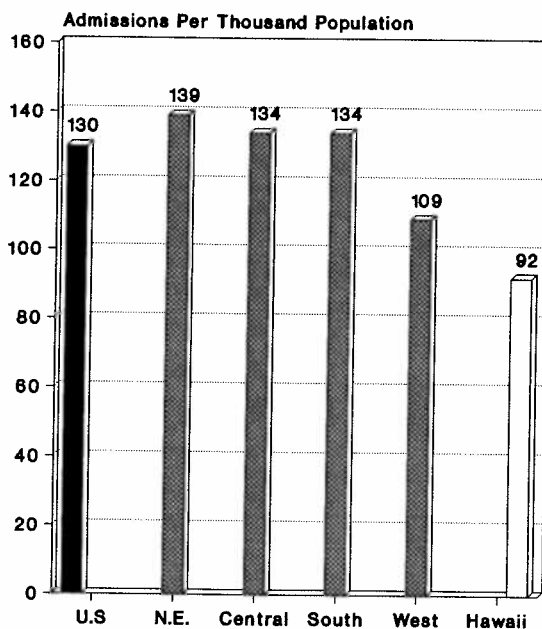
lished previously on the share of Hawaii's Gross State Product (GSP) consumed by health care expenditures. Further, since health care costs have been rising steadily in both Hawaii and the U.S., business leaders and government authorities here may well assume that Hawaii's costs are comparable to those on the mainland U.S.

Hawaii's health service providers believe that since the State is among the lowest in rates of hospital admissions and outpatient visits in the country (Graphs 1 & 2)¹, has far fewer hospital beds per population (Graph 3)², and hospital expenses generally below those of comparable, high cost-of-living states (eg California, New York, and Alaska³), the percent of Hawaii's GSP used to provide medical goods and services is presumed to be less than that for the U.S. as a whole.

Methods

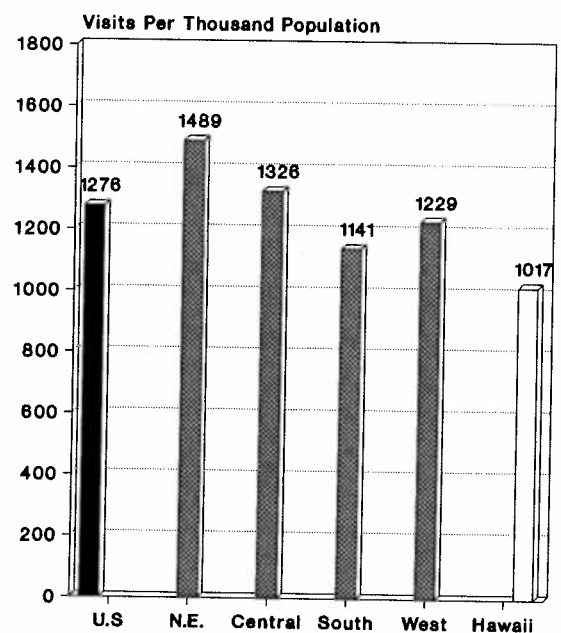
This paper compares the major medical economic data ele-

GRAPH 1.
SHORT-STAY HOSPITAL ADMISSIONS (1987)



Source-1990 Statistical Abstract of U.S.

GRAPH 2.
HOSPITAL OUT-PATIENT VISITS (1987)



Source-1990 Statistical Abstract of U.S.

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Listen to your heart.

*Sandra called me on the
way to work to remind
me about our family
dinner tonight.*

*Emily left a message
on my AMS: 'I love
you, Daddy.'*

*I called her back and
said, 'I love you, too.'*

*Nothing feels better
than keeping in touch.*

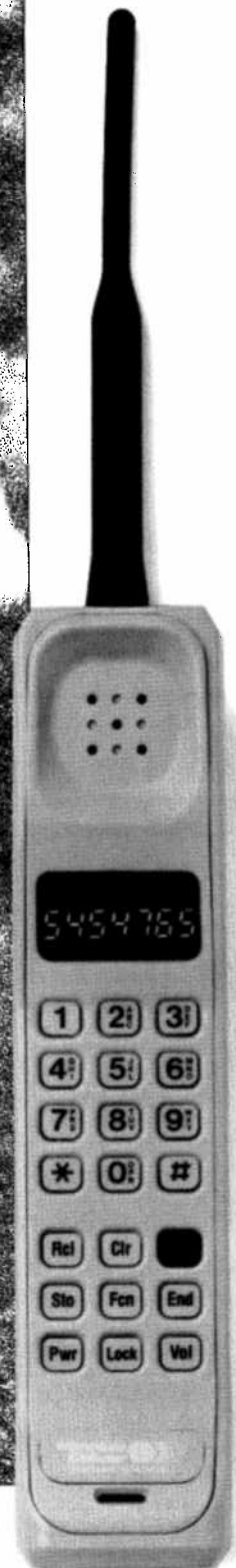
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COMPARISON (Continued from page 10)

ments in the U.S. and Hawaii. The sources of information are existing published data, primarily the Hawaii Department of Business, Economic Development & Tourism's (DBED) annual *Data Book* and the Health Insurance Association of America's (HIAA) annual *Source Book of Health Insurance Data*.

The HIAA data are produced largely from the federal Health Care Financing Administration's (HCFA) tabulation of Personal Health Care Expenditures (PHCE), whereas the State's DBED reports use the methodology of the U.S. Commerce Department's Personal Consumption Expenditures (PCE) — Medical Care component, as reported in National Income and Product Accounts (NIPA). There are minor differences in accounting methodologies used by HCFA and Commerce. As a result, the Commerce NIPA and related DBED figures have been somewhat lower relative to the HCFA tabulations. (HCFA and Commerce are working to resolve this problem in the next 2 years.) If this difference in methodolo-

gies is left unadjusted, the Hawaii data appears even more favorable (lower) than presented in this paper.

The following data and graphs compensate for this built-in understatement by raising DBED reported Hawaii figures by the same ratio of the difference between NIPA and HCFA medical care consumption accounts for each of the years cited (eg the effect for 1988 was to increase Hawaii's percent of GSP for medical care from 7.5% to 8.1%). These interpolations are based on the U.S. Department of Commerce's *Personal Consumption Expenditures Methodology Papers: U.S. National Income and Product Accounts*, June 1990, and issues of the U.S. Department of Commerce's periodical *Survey of Current Business*. Where minor data elements for Hawaii are unavailable, ie, net cost of health insurance, public health activities, research and construction (combined total less than 12% of total health expenditures), they are interpolated at national norms for those years.

Results

A comparison between U.S. and Hawaii health expenditures indicates that the percent of Hawaii's GSP consumed by medical goods and services was at 8.1% in 1988, versus the U.S. experience of 11.1% of GNP (Table 1, Table 2, and Graph 4). A review of data from prior years indicates this divergence began in 1983 and has increased since then (Graph 5). Graph 6 (per capita annual health expenditures in current dollars for both Hawaii and the U.S.) demonstrates that the ratio favorable to Hawaii is not simply an aberration of the rapidly expanding local economy (the GSP denominator in the ratio), but is due to a generally lower and slower rate of growth of the health care expenditures in Hawaii.

TABLE 1

1988 HEALTH EXPENDITURES BY TYPE (Millions)

| Type of Expenditure | U.S. | Hawaii* |
|--|-----------|---------|
| Personal Health Care*** | \$478,000 | \$1552 |
| Program Administration and Net Cost of Private Health Insurance ⁵ | 26,000 | 85 |
| Government Public Health Activities ⁶ | 17,000 | 51 |
| Total Services and Supplies | 521,000 | 1,688 |
| Research and Construction ⁷ | 19,000 | 64 |
| Total Health Expenditures | \$540,000 | \$1,752 |

* The Hawaii figures have been proportionally raised for an equitable comparison with national accounts, as noted in the preceding discussion.

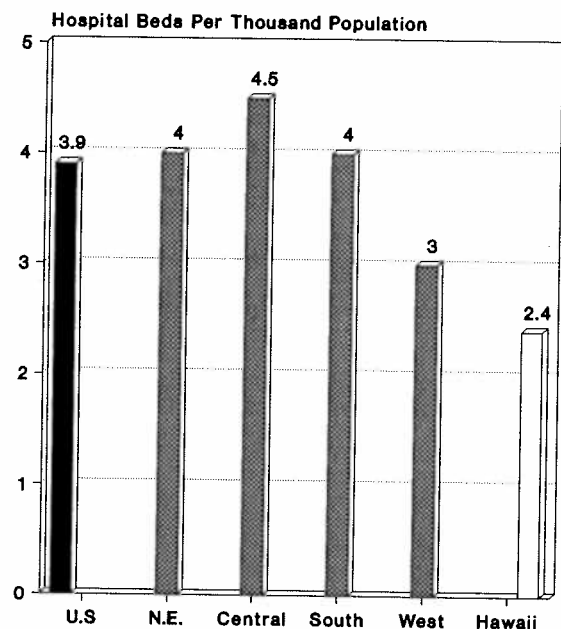
** "Personal Health Care" represents private and public spending for direct health and medical services to individuals, whether insured or not. The figure includes items such as hospital, nursing home, and home health care; physician, dentist, and other professional care; drugs and other medical nondurables; vision products and other medical durables; also included are nonprescribed drugs and medicines, household supplies and other items not covered by insurance.

TABLE 2

1988 U.S. AND HAWAII HEALTH EXPENDITURES (Millions) AS A PERCENT OF GROSS PRODUCT^a

| | | | | | |
|----------------------------|-------------|---|--|---|-------|
| U.S. Health Expenditures | \$540,000 | = | | = | 11.1% |
| Gross National Product | \$4,881,000 | | | | |
| Hawaii Health Expenditures | \$1,752 | = | | = | 8.1% |
| Gross State Product | \$21,588 | | | | |

GRAPH 3.
SHORT-STAY HOSPITAL BED SUPPLY (1987)



Source-1990 Statistical Abstract of U.S.

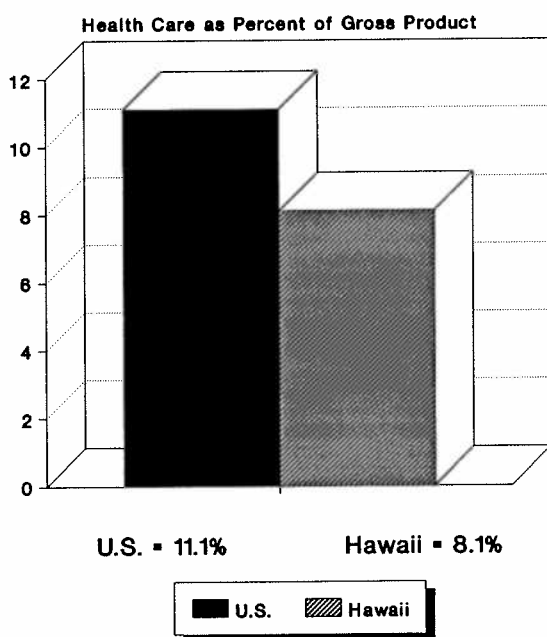
When compared to other industrialized countries with purportedly exemplary national health programs, Hawaii's health expenditures as a percentage of the economy are lower than in many. Graph 7 depicts the relative health expenditures as a percent of Gross Domestic Product (GDP = GNP less net foreign investment income), in the U.S., Canada, United Kingdom, Japan, Germany, Sweden, the Netherlands and Hawaii. Hawaii has the third lowest expenditure ratio in this comparison.

Discussion

The specific causes of this enviable cost of health care record in Hawaii have never been delineated. Many theories have been advanced to explain our favorable health status (greatest longevity in the U.S.) and lowest hospital utilization. The various factors mentioned include the mild climate, the multi-cultural population, an oligopolistic health insurance industry, a mandated workplace health insurance coverage, as well as the role of the State Health Planning and Development Agency (SHPDA), to name a few. To date, none has proven to be the primary element restricting our health service utilization and expenditures. This is worthy of further research, since the answer may be beneficial to other communities attempting to deal with soaring health costs.

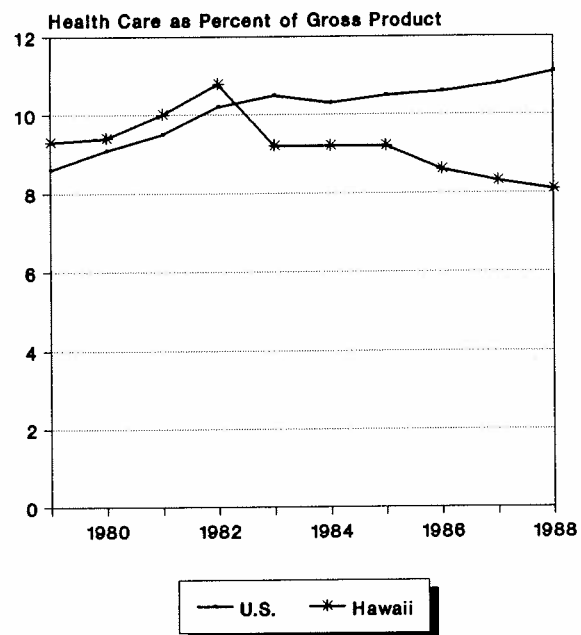
However, one wonders whether our overall health expenditures are lower, in part, because Hawaii's health providers are being paid less per unit of service than their peers in other communities with comparable high costs of doing business, as is frequently implied by anecdotal comparisons with Mainland counterparts.

GRAPH 4.
1988 HAWAII VS. U.S. HEALTH EXPENDITURES



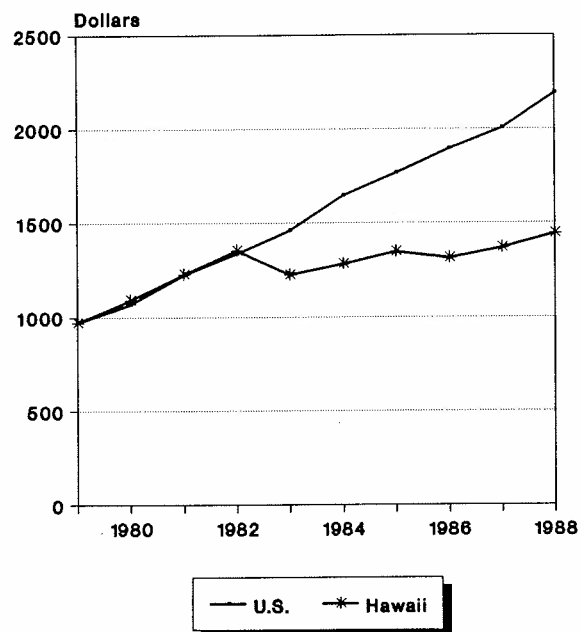
(Derived from HIAA and DBED data)

GRAPH 5.
HEALTH EXPENDITURES AS % OF GNP AND GSP



(Derived from HIAA and DBED data)

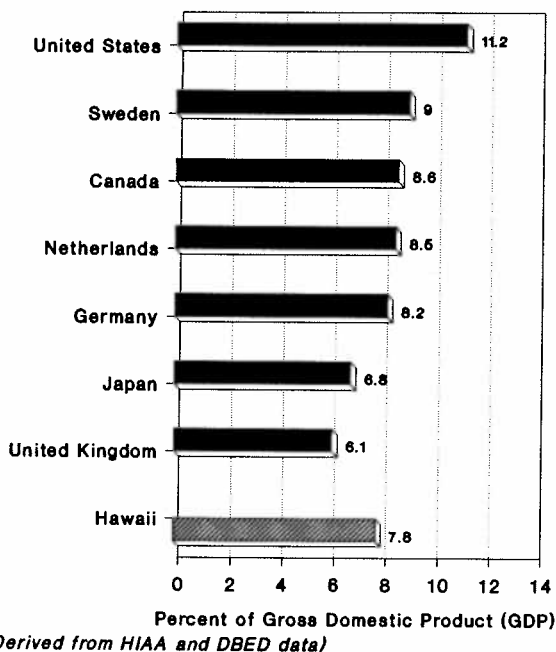
GRAPH 6.
PER CAPITA ANNUAL HEALTH EXPENDITURES



(Derived from HIAA and DBED data)

(Continued) ➤

**GRAPH 7.
HEALTH EXPENDITURES AS % OF 1987 GDP**



Conclusion

Health care expenditures have been rising inexorably all across the U.S., including Hawaii. Much has already been written about the causes of this growth, eg increasing consumer demand, aging population, advances in health technologies, scarcities of professional labor and general inflation. Nevertheless, this paper demonstrates that Hawaii's health care purchasing power, relative to other costs in our economy and the U.S. as a whole, is a proven better value to the people of our community.

Perhaps the State would be best served if the efforts of our community leaders focused on a comprehensive study of why Hawaii has done so well. In this way we might learn how to maintain and improve on this successful record, and transfer our experience to other states.

LEGEND AND REFERENCES

1. 1990 Source Book of Health Insurance Data, published by Health Insurance Association of America (HIAA), page 78, Table 5.2, lists days of short-stay hospital care per 1,000 U.S. population for 1988 as 834. The Hawaii Department of Health (DOH) 1988 Statistical Report, page 94, Table 7 lists average statewide acute care daily census (including Tripler Army Medical Center [TAMC]) as 2,073. The Hawaii Department of Business, Economic Development & Tourism's (DBED) 1990 Data Book, page 14, Table 3 lists a 1988 *de facto* state population of 1,216,700. When 2,073 is multiplied by 366 days (a leap year) and divided by the *de facto* population of 1,216,700, Hawaii had 624 days of acute care hospitalization per thousand population for 1988.

Graphs 1 and 2 use data published in the 1990 Statistical Abstract of the U.S. 1987 short-term hospital admissions and out-patient visits (page 106)

are divided by 1987 regional population figures (page 20) to create Graphs 1 and 2, respectively.

2. The DBED 1990 Data Book, page 618, Table 719 ranks Hawaii 49th in hospital beds per population. The HIAA 1990 Source Book of Health Insurance Data, page 64, Table 4.9 lists total U.S. acute hospital beds as 946,697 for 1988. The U.S. Department of Commerce, Bureau of Census, 1990 Statistical Abstract of the U.S., page 7, Table 2 lists the 1988 U.S. population as 246,329,000. Therefore, U.S. acute hospital bed per thousand population were 3.84. Whereas the DOH 1988 Statistical Report, page 90, Table 1 lists Hawaii statewide acute hospital bed capacity (including TAMC) for 1988 at 2,855. And, the DBED 1990 Data Book, page 14, Table 3 lists the 1988 *de facto* state population as 1,216,700. Therefore, the Hawaii acute hospital beds per thousand population were 2.35. Or, Hawaii was only 61% of the U.S. ratio of hospital beds to population.
- Graph 3 uses data published in the 1990 Statistical Abstract of the U.S. 1987 short-term beds (page 106) are divided by 1987 regional population figures (page 20).
3. The HIAA 1990 Source Book of Health Insurance Data, page 64, Table 4.9 lists 1988 average costs per hospital stay (expenses) for each state. Hawaii average hospital cost per hospital stay was \$4,651. Alaska was \$5,616 per stay. New York was \$5,070 per stay. California was \$5,061. Nine states had higher average hospital stay costs than Hawaii.
4. U.S. value from HIAA 1990 Source Book of Health Insurance Data, page 56, Table 4.1. Hawaii value from DBED 1990 Data Book, page 349, Table 388 "1988 Personal Consumption Expenditures, Resident Population, Medical Care: \$1,441,000,000."
5. 1988 U.S. value for Program Administration and Net Cost of Private Health Insurance from HIAA 1990 Source Book of Health Insurance Data, page 56, Table 4.1. Hawaii data unavailable, but estimated at same proportion (5.5%) of Personal Health Care as U.S. expenditures.
6. 1988 U.S. value for Government Public Health Activities from HIAA 1990 Source Book of Health Insurance Data, page 56, Table 4.1. Hawaii data unavailable, but estimated at same proportion (3.3%) of Personal Health Care as U.S. expenditures.
7. 1988 U.S. value for Research and Construction from HIAA 1990 Source Book of Health Insurance Data, page 56, Table 4.1. Hawaii data unavailable, but estimated at same proportion (4.1%) of Personal Health Care as U.S. expenditures.
8. 1988 Gross National Product from HIAA 1990 Source Book of Health Insurance Data, page 57, Table 4.2. Gross State Product from DBED 1990 Data Book, page 346, Table 385.

